A STUDY TO ASSESS THE EFFECTIVENESS OF OLIVE OIL MASSAGE AND WEIGHT GAIN AMONG LOW BIRTH WEIGHT NEONATES IN SELECTED HOSPITALS AT GUNTUR, A.P.

BY

30083611

A DISSERTATION SUBMITTED TO THE TAMILNADU Dr.M.G.R. MEDICAL UNIVERSITY, CHENNAI, IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN NURSING

MARCH – 2010

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CERTIFIED THAT THIS IS THE BONAFIDE WORK OF

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30083611

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

CHAPTER – I

INTRODUCTION

"Behold, children are a heritage from the Lord

The Fruit of the womb is his reward."

Psalm: 127: 3

BACKGROUND OF THE STUDY

The miracle of life begins at conception and continuous through out the life span. The manifestation of this miracle is encountered during new born and infancy. Neonates' period is the crucial period for the infant who is facing many of the physiological adjustment for extra uterine existence.

Normal birth weight for a healthy infant born at term between 38- 42 weeks should have an average birth weight 2.7 to 3.1kg with a mean of 2.9kg. Infants born at term or post term may weigh less than 2500gm is considered to be low birth weight babies.

W. H .O defines low birth weight as one whose birth weight is 2500grm or less irrespective of the gestational age very low birth weight infants weigh 1500 gram or less and extremely low birth weight infants weigh 1000grms or less.

Incidence of low birth weight is generally highest in those countries where the mean birth weight is low and as such varies from about 5% to 40% of live births .In India about two third of the infants weigh less than 2500grams. The incidence of low birth weight baby more than 20 million are born each year weighing less than 2500grams 5.5 pounds according to

WHO for 17 percent of all birth in the developing world. A rate more than double the level in industrialized countries 7 percent infants with low birth are at higher risk of dying during the early months and years. Those who survive are liable to have an impaired immune system and may suffer a higher incidence of such chronic illnesses as diabetes and heart disease in later life.

Pre-term babies are functionally immature and special care is needed for their survival. It is relevant especially in the tropics to segregate the babies requiring special care out of the large number of new borns of low birth weight.

In ability to suckle the breast and to swallow. Incapacity to regulate the temperature within limited range from 96-99^{0}F in ability to control the cardio –respiratory function without cyanotic attacks.

Maintain relatively stable body temperature adequate humidification to counter balance increased insensible water loss. Prevent or treat atelectasis. Prevent infection Maintain nutrition adequate nursing care.

Maintain stable body temperature. Infants should be nursed under a radiant warmer with protective plastic covers. The smallest babies are best treated in the incubator where temperature and humidity can be better stabilized. Respiratory support Measures are taken to clear the air passage and to administer oxygen. The baby is placed in the incubator with oxygen. Continues oxygen monitoring is done by pulseoximeter. Follow strict aseptic technique while handling the infant. Proper sterilization of all the utensils each baby should have separate utensils.

Early feeding between 1-2 hours of birth, intervals of feeding ranges from hourly, 3 hourly .Tube feeds dropper or spoon bottle intravenous. Fluid requirements vary from 60ml /kg / day 10% dextrose on first day 150 ml / kg / day. Premature infants require more calories60 calories per kg/day from 7th day 100 calories per / kg / day from 7th to 14th day and about 120-150 on 21st day. The infant should be handled as minimum as possible and with extreme gentleness. The face and buttocks are washed daily and the cord is swabbed with spirit oil bath can be given possible and with gentleness. Baby should lie on one side following feed temperature should be maintained. Daily weight recording should be done.

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Massage therapy encompasses a wide variety of techniques that manipulates the soft tissue. The word massage is derived from the Latin "massa" or green massein or "masso" meaning or touch therapy is a natural and almost instructive way to care. By lightly touching, rubbing the entire body of the baby causes comfort both physically and psychologically.

Nature massage babies in the womb, where contractions rhythmically squeeze and push, providing stimulation to the baby, studies show that more the babies are touched, nurtured and tenderly massaged, the happier and more balanced they grow. Massaging the baby helps to fulfill their emotional, psychological and physical needs. It enhances the bonding, improves sleep patterns, stimulates, circulation, improves digestion, facilitates food absorption results faster weight gain and by constant massaging, the infant level of stress hormones reduces as a result it improves immune function.

Infant massage was introduced formally into the states in 1978, when Vimala Schneider in an orphanage in northern India, developed attiring program for instructions, at the request of child birth educators. An early research study by Rice 1976 had showed that premature babies who were massaged suggested have weight gain and neurological development over those who were not massaged. From Mc clues training in India her knowledge of Swedish massage and reflexology, along with her knowledge of yoga posters

that she had already adapted for babies, she became that fore most authority on infant massage. In 1986 she founded the international Association of infant massage.

Massage or touch therapy is a natural and almost instinctive way to care. By little touch the entire body of the baby cause comfort. Both physically and psychologically Studies shows that more the babies are touched, nurtured and tenderly massaged the happier and more balanced they grow. It enhances the bonding improves sleep pattern, stimulates food absorption, resulting faster weight gain, by constant massage therapy has no virtual control indication and it produce pleasant effect.

NEED FOR THE STUDY

Birth weight is a major public health problem in the United States, contributing substantially both to infant mortality and to childhood handicap. The principal determinant of low birth weight in the United States is preterm delivery, a phenomenon of largely unknown etiology. Preterm delivery is more common in the United States than in many other industrialized nations, and is the factor most responsible for the relatively high infant mortality rate in the United States.

There is a significant variation in low birth weight incidence across the developing world, ranging from 6 percent to 27percent. South Asia has the highest incidence with more than a quarter of all infants born with low birth weight. The lowest incidence, at 6 percent, is in East Asia and the pacific and central and Eastern Europe.

India alone is home to more than a third of all low-birth weight infants in the developing world. More than one in every seven infants in sub-Saharan Africa (15 percent) are also born with low birth weight. South Asia and sub-Saharan Africa combined account for more than three quarters (78 percent) of low –birth weight infants in the developing world. South Asia

alone accounts for more than half (55percent),and also the region where most infants are not weight at birth. More than 18 million infants in the developing world have low birth weight more than half are in south Asia,7 million are in India infants with low birth weight are at higher risk of dying during there early months and years. Those who survive are liable to have an impaired immune system and may suffer a higher incidence of such illnesses as diabetes and heart disease in later life.

Study on touch of all kinds is therapeutic. Also explains that touch is an element that can create a warm, caring and patient friendly atmosphere. Talton explains touch as two types. Task touch and caring touch where former is what occurs when there is a physical need. Touch is an important way to establish a good nurse patient relationship. Author says that touch is important for every one, but is more important for a new born infant as it will contribute or enhance growth and development deprivation of touch in infancy and child hood may result in many behavior problems in later life. It may also result in retardation of growth and development and also set in a feeling of rejection of not being loved or wanted by anyone. Talton, et.al., (2000)

Study on Incidence of weight (less than 2,500 g) Hispanic infants is similar to that of non-Hispanic whites of maternal nativity and place of residence to this epidemiologic paradox. The proportion of low birth weight Hispanic (*n* = 22,892) infants ranged from 4.3% for Mexicans to 9.1% for Puerto Ricans. Maternal age, education, trimester of prenatal care initiation, and place of residence were associated with the prevalence of low birth weight infants among Puerto Rican but not foreign-born Mexican or Central-South American mothers. In very low-income (less than $10,000/year) census tracts, Mexican and other Hispanic infants with US-born mothers had low birth weight rates of 14 and 15%, respectively. In contrast, Mexican and other Hispanic infants with foreign-born mothers who resided in these areas had low birth weight rates of 3 and 7%, respectively. In a logistic model that included only impoverished

infants, the adjusted odds ratio of low birth weight for those with US-born mothers equaled 6.3 (95 percent confidence interval 2.3–16.9). James et.al (1983)

The higher mortality rate among black infants than among white infants in the United States results largely from the greater frequency of low birth weight and prematurity among black infants. Higher rates of low birth weight and preterm delivery have been associated with shorter intervals between pregnancies. A total of 7.7 percent of the 298 black women and 3.2 percent of the 1628 white women delivered premature, low-birth-weight infants (P<0.001). Among the black women, an inter pregnancy interval of less than nine months was associated with a significantly greater prevalence of preterm delivery and low birth weight in the neonates (11.6 percent, vs. 4.4 percent for longer inter pregnancy intervals; P = 0.020). Among the white women, only intervals of less than three months between pregnancies were associated with a greater prevalence of prematurity and low birth weight in the infants (11.8 percent vs. 2.8 percent; P<0.001).Read, M. et.al.,

Study on among birth rates, the birth weight distributions, birth weight-specific mortality risk, and cerebral palsy risk survivors. Prevalence of cerebral palsy in recent decades, largely because of the increasing contribution of children of low and very low birth weight to its prevalence. The only demographic determinant of cerebral palsy prevalence that is changing rapidly in the United States is survival of low birth weight and very low birth weight infants. Based on the magnitude of change in the survival of low and very low birth weight infants, it is estimated that childhood prevalence of cerebral palsy is more than 20%in United States. Vidya et.al., (1986)

.

In India, recently efforts have been made to collect nationally representative estimates of birth weights from institutional and community deliveries. The reliable institution based National Neonatology Forum data for the year 1995 on 37082 live births (nearly 0.1% births in the country) from 15 participating centers Low-birth weight babies are more likely than babies

of normal weight to have health problems during the newborn period. Many of these babies require specialized care in a newborn intensive care unit (NICU). Serious medical problems are most common in babies born at very low birth weight. Hyperactivity, low attention span, and impulsive behavior characterize the syndrome known as hyperkinetic disorder

.

Respiratory distress syndrome (RDS): This breathing problem is common in babies born before the 34th week of pregnancy. Babies with RDS lack a protein called surfactant that keeps small air sacs in the lungs from collapsing.

Bleeding in the brain (called intraventricular hemorrhage or IVH): Bleeding in the brain occurs in some very low- birth weight premature babies, usually in the first three days of life.

Patent ductus arteriosus (PDA): PDA is a heart problem that is common in premature babies. Before birth, a large artery called the ductus arteriosus lets the blood bypass the baby's nonfunctioning lungs. The ductus normally closes after birth so that blood can travel to the lungs and pick up oxygen. When the ductus does not close properly, it can lead to heart failure.

Necrotizing enterocolitis (NEC): This potentially dangerous intestinal problem usually develops two to three weeks after birth. It can lead to feeding difficulties, abdominal swelling and other complications.

Retinopathy of prematurity (ROP): ROP is an abnormal growth of blood vessels in the eye that can lead to vision loss. It occurs mainly in babies born before 32 weeks of pregnancy. Most cases heal themselves with little or no vision loss.

Olive Oil: Moisturizing the face with a mixture of extra Skin care in addition to the internal health benefits of olive oil, topical application is quite popular with fans of natural health remedies. Olive Oil is the preferred grade for moisturizing the skin, especially when used in the Oil Cleansing Mmethod (OCM). OCM is a method of cleansing olive oil, castor oil (or another suitable carrier oil) and a select blend of essential oils. Olive oil is also used by some to reduce ear wax buildup Olive oil can be used as an effective shaving oil to shave facial and other body hair giving results that are equivalent to expensive commercial products.

Olive Oil not only makes up the source of basic fatty acids necessary for the body which cannot be synthesized and some vitamins (A,D,E,K) and can only be dissolved in oil but also has a high caloric value. It is the only natural fruit oil which can directly be consumed just like fruit juice and has so important position in the human nutrition with its natural odor, taste and color.

It nourishes, protects and softens the skin and keeps the body and the face young looking. It was widely used for ointments, after baths, massages, face masks or hair. Olive Oil is recommended for chafing the body, for bringing on perspiration, for avoiding body fluids and for dissipating lethargy. When retained in the mouth, it maintains teeth's whiteness and strengthens gums.

Use pure olive oil to rub face, hands and all body as a massage to rejuvenate the skin. Wait for minimum half an hour. Can stay longer on skin. During the ancient times, people were using olive oil to rub the body after the bath and contributes to the development of the brain and bones in children. It is also recommended as a source of vitamin E for older people. Olive oil also acts like a natural anti-oxidant, that slows down the natural aging process. It also slows down acid overproduction in the stomach.

Pure olive oil without hair cream or balsam, shampoo hair rinse well, and dry. sufficient olive oil on head, comb and rub hair and massage scalp with pure olive oil so oil penetrates all scalp and hair Keeps hair healthy .

It maintains metabolism digestive system thereby diminishing the potential for ulcers and other gastrointestinal problems. Olive oil is a natural juice which preserves the taste, aroma,vitamins and properties of the olive fruit. Olive oil is the only vegetable oil that can be consumed as it is freshly pressed from the fruit.

Birth of a newborn is an exciting scenario for parents! After the birth, baby massage becomes a priority. Baby massage is a childcare practice, which has been started by our ancestors. Massaging the baby regularly makes the bones stronger. Research shows that baby massage is extremely important for each and every child; as also helps the child to grow and become healthy.

Baby massage is useful for the overall development of premature babies. Baby massage is of great help; it indeed makes the baby very active, alert and healthy. It builds a stronger bond between parent and child. Baby massage not only gives the baby love and security; but it also helps the parent to be familiar with baby's visual signs and actions. Baby massage relaxes the baby and helps them to get a good, sound sleep. Massaging the baby improves the digestive system and helps them to pass gas. A good oil massage helps them to be more flexible and even increases the blood circulation. Baby massage helps to improve the immune system and also helps to improve the skin co lour of the baby.

Baby massage is extremely important and can continue it till the time the baby is three to four years old. This is because; there are a lot of benefits of baby massage. Research has proved that baby massage is beneficial when you do it on a regular basis. Hence, baby massage should be a part of daily activity for baby

Olive Baby Massage Oil Moisturizes infant's skin and helps to protect it from dryness. The luxurious bland of almond oil, jojoba oil and olive oil has been carefully chosen for its calming, nourishing properties. Infant Care Olive oil is one of the only safe choices for natural infant care. It works very well on the dry flaky skin condition on the scalp called cradle cap. It is also a safe and effective alternative to commercial baby oil.

Olive oil is composed of essential fats and has many uses as a natural medicine. It comes from olive's juice and is rich in oleic acid. Is a great antioxidant with vitamin E, Polyphones and Flavonoids. Its antioxidant action helps to prevent several diseases, such as heart related conditions and some forms of cancer.

Kangaroo mother care to reduce morbidity and mortality in low birthweight infants. Care of low birthweight babies is expensive and requires specialist care. Kangaroo mother care (KMC) involves skin to skin contact between mother and her newborn, frequent and exclusive or nearly exclusive breastfeeding and early discharge from hospital. Compared with conventional care, KMC was found to reduce severe illness, infection, breastfeeding problems, and maternal dissatisfaction with method of care improve some outcomes of mother-baby bonding. (lee etal. (2002)

Severe nursing shortage adds to the high mortality of low birth weight babies in developing countries. The efficacy of maternal nursing care a prospective matched case-control study. Outcome was compared in low birth weight babies nursed by mothers (mothers' group, n=151,*cases*), versus professional nurses group, n=211,*controls*). Irrespective of condition on admission, weight gain was significantly higher (p<0.001) in the mothers' group. Mortality was also lower in the mothers' group for babies with pathological jaundice, skin/umbilical sepsis, and no disease except low birth weight (p<0.001). Undercurrent diarrhoea, aspiration pneumonia, and septicemias did not differ. Training mothers to nurse their low birth weight babies can

significantly reduce mortality rates and decrease workload on nurses. Policy formulation using this approach can save costs in developing countries.

Very low birth weight babies, being born preterm, are at risk for feeding difficulties. Medical complications may prolong their hospital stays and further delay their progression towards oral feeding. This study focused on the benefits of breastfeeding to very low birth weight babies, but very few have explored the breastfeeding experiences of their mothers. (Ying, 2009)

The researcher was interested in this study because there is lot of advantages of olive oil massage low birth babies gain more weight also improve immunity low risk for infection, reduced hospital stay. Techniques of massage therapy is very easy to practice by any parents it can be practiced at home setting there is no ill effect for this therapy Massage involves touch and handling can elicit cutaneous pro prioceptive vestibular and sensory perceptions these sensations are among the earliest to develop during gestation and ultimately provide stimulation organization communication and emotional exchange. Massage therapy is proposed as a non medical treatment intervention for infants

Study on the effect of tactile Kinesthetic stimuli to preterms on physiologic parameters. Physical growth and behavioral development 48 well pre-terms with birth weights between 1000-2000 grams. Experimental group received tactile Kinesthetic stimulation in the form of structured baby massage from day 3 to term corrected age they were observed for changes vital parameters heart rate, respiration temperature, and oxygen saturation during the 1st few days of hospitalization. There after massage was continued at home. Changes in weight, length and head circumference and neurobehavioral were assessed in both groups before during the 1st few days of hospitalization. There after massage was continued at home. Changes in weight, length, and head circumference and neurobehavioral were assessed in both the groups before, during after the study period. An increase in heart rate weight gain of

4.2grams to well pre term infants has a beneficial effect more than control group were noted. No significant complications were noted. Tactile- kinesthetic stimulation when administered to well preterm infants has a beneficial effect on growth and behavioral development with no adverse effect on physiologic parameters. Fernandes, et.al., (2002)

Study on the touch therapy or massage triggers may physiologic changes that helps infants and children grow and develop. Touch also plays an important role in the parent child bond. Aorn (1998)

Research from experiments conducted at the Touch Research institutes at the University of Miami School of medicine and Nova southeastern university has been cited for the clinical benefits massage on infant and child rearing to disperse gas, relax muscle growth and develop. Massage can stimulate nerves in the brain which facilitate food absorption, resulting in faster weight gain. It also lowers level of stress hormones, resulting in improved immune function. Both premature infants and full-term baby's need the relaxant occurs with massage between apparent and child enhances the entire process of bonding that comes with act through all of the senses, including that comes from massage and moving their limps and muscles.

In infants with colic, massage provides the relief necessary to disperse gas ease muscle spasms, tone the digestive system and help it work efficiently. Some techniques even help bring relief from teething and emotional stress. The stimulation an infant receives from massage can aid circulation, strengthen muscles, help digestion and relieve constipation' it relief from other problem.

The bonding that occurs with massage between parent and child enhances the entire process of bonding that comes with contact through all of the senses, including touch voice, and sight. It affords a physical experience of quality time between the parents and the child as

well as with any significant others in a babies life. Massage or touch therapy is a natural and almost instinctive way to care .By little touch the entire body of the baby cause comfort. Both physically and psychologically Studies shows that more the babies are touched, nurtured and tenderly massaged the happier and more balanced they grow. It enhances the bonding improves sleep pattern, stimulates food absorption, resulting faster weight gain, by constant massage therapy has no virtual control indication and it produce pleasant effect. This can be tried in any neonatal setting of clinical practice. Application may a potential to improve low birth weight. It is a culturally accepted practice and it should be encouraged in the hospital care and at home. found that oil Massage helps for better somatic growth. Application of a barrier water loss from the skin and helps to maintain temperature better thermoregulation may promote better weight gains.

Massage is a natural and almost instructive way to care the infant. It has been originated from China, India and flourished in Persia. Infant massage has a long tradition in India. In the earlier Vedic period Ayurvedic baby massage was started for cleaning the baby immediately after birth with the soft wheat dough dipped in an almond and turmeric powder.

Study on the amount of loving touch increases the more the infant develops the knowledge security comfort and trust. Infant who was provided with maternal warmth and touch showed increase in bonding and nurturing characters than the infant who was not provided. Anderson (1998).

Massaged infants spent more time in active alert and active- awake states, cried less and had lower salivary cortisol levels during massage suggesting lower stress levels. Following the massage, they spent less time in active awake-state and fell asleep. Massage group infants gained more weight, massage directly stimulates the musculoskeletal, norepinephren nor epinephrine and cortisol and circulatory systems there by effecting the biochemical and physiological process regulated by those systems as well. Early and parental touch moderates

infant's levels of stress hormones such as nor epinephrine and cortisole promotes weight gain and enhances immune function. An increase in epinephrine and non epinephrine is normal for new born and is considered a healthy, adaptive response to the stress of the neonatal period

Study on the mother of premature babies had fear of thought that the baby will respond in a negative way by her touch Here the neonatal nurse helped the mother in identifying the cues, handle the baby in confidence, enabling to touch gently and proceed with massage techniques, these enable to create the positive developmental out comes in the baby. Razo (1998).

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of olive oil massage and weight gain among low birth weight neonates in selected hospitals at Guntur, A.P.

OBJECTIVES

1. To compare the pre and post test weight among low birth weight neonates in relation to olive oil massage in experimental group
2. To compare the mean difference in the weight between low birth weight neonates in experimental and control group
3. To find out the significant difference in mean weight gain in relation to back ground factors among low birth weight neonates in experimental group.

HYPOTHESIS

H_1 : There will be a significant difference in mean weight before and after oil massage among low birth weight neonates in experimental group.

H_2 : There will be a significant difference between the mean difference in weight gain between low birth weight in experimental and control group

H_3 : There will be a significant association between the mean difference in weight and background factors among low birth weight neonates.

OPERATIONAL DEFINITIONS

1. Olive oil: It refers to vegetable oil which is used to massage the body in order to improve skin texture and increase thermoregulation.

2. Massage: . Refers as a therapeutic maneuver of manipulating the soft tissues firm strokes with palms of the hands of 5 seconds each from head to foot as specified in the Olive oil massage procedure (Appendix – VIII).

3. Weight gain: It refers to growth in velocity as measured by weight of the baby in a weight scale in kilograms.

4. Background Factors: It refers to those variables which are thought influence mother's data including age, education, income, type of family, health status, and religion and infant data including gestational age, Apgar score at 5 mt., birth weight, sex, time of initiation of breast feed, type of breast feeding, birth order.

5. Effectiveness: It refers to the gain in weight of the neonates after olive oil massage it was measured in terms of the mean difference in weight gained.

BACKGROUND FACTORS

Mother's data including Age, Religion, education, income, type of family, health status, Hb status, income of the family work of the mother weight gained by the mother during pregnancy type of Labor. Infant data including gestational age, Age of the infant in days, sex, Birth weight of the infant, condition of the baby at birth, Apgar score at 5 mt, Birth order, type of feeding, time of initiation of feed, total number of feed per day.

ASSUMPTIONS

1. Low birth weight babies' mothers will give consent for oil massage.
2. Oil massage will not induce any adverse effect on neonates.

DELIMITATIONS

1. Who are admitted in the hospital at the time of data collection.
2. Sample selected by convenient sampling method.

CONCEPTUAL FRAME WORK

Polit and Hungler (1995) states that conceptual frame work in inter related concepts on abstractions that are assembled together in some National Scheme by their virtue of their relevance to common them. Frame work may serve as a spring board for scientific advancement.

A conceptual frame work is made up of concepts, which are mental images of a phenomenon. Those concepts are linked together to express the relationship between them. It guides the investigator to know what data need to be collected and gives direction to the entire research process.

The investigator developed a conceptual model based on the ANA model (2003) for nursing process.

Assessment The nurse collects data on patient's health status. This information is used for problem identification; Assessment is done based on subjective and objective data.
In this study assessment was done by observing weight before administering olive oil massage and collecting background data of neonates and mothers of neonates.

Planning in this step of the process care plan is formulated it is individualized, based on the assessment and nursing diagnosis. The care plan contains client goal with expected out come and appropriate intervention. Expected out come are the criteria used to evaluate the effectiveness of care.

The investigator planned to give olive oil massage for low birth weight neonates (weighing more than 1kg 500grams to 2.499 grams) for 3 days after birth. 5 ml olive oil / kg of body weight was used for 15 minutes, morning and evening for 10 days.

Implementation: During this step individualized nursing care is given to client according to the plan. Intervention are continually modified as needed or seemed necessary by an ongoing nursing assessment of the client response.

In this study implementation refers to the administration of olive oil massage for 15 minutes 5 ml /kg of body weight daily morning and evening for 10 days, following the steps in olive oil massage procedure (Appendix – VIII).

Evaluation: The nurse determines the client's progress towards meeting expected out come and achieving goals and the success of the nursing intervention. This step provides assistance for the revision of the nursing care plan as and when needed to resolve client's problem.

In this study evaluation was done by recording weight by a standardized electronic weighing scale daily morning before the procedure by the ward sister to avoid bias from the researcher. The average weight neonates were considered to be the post test weight among neonates.

The study aimed to test the effectiveness of olive oil massage on weight gain among low birth weight neonates.

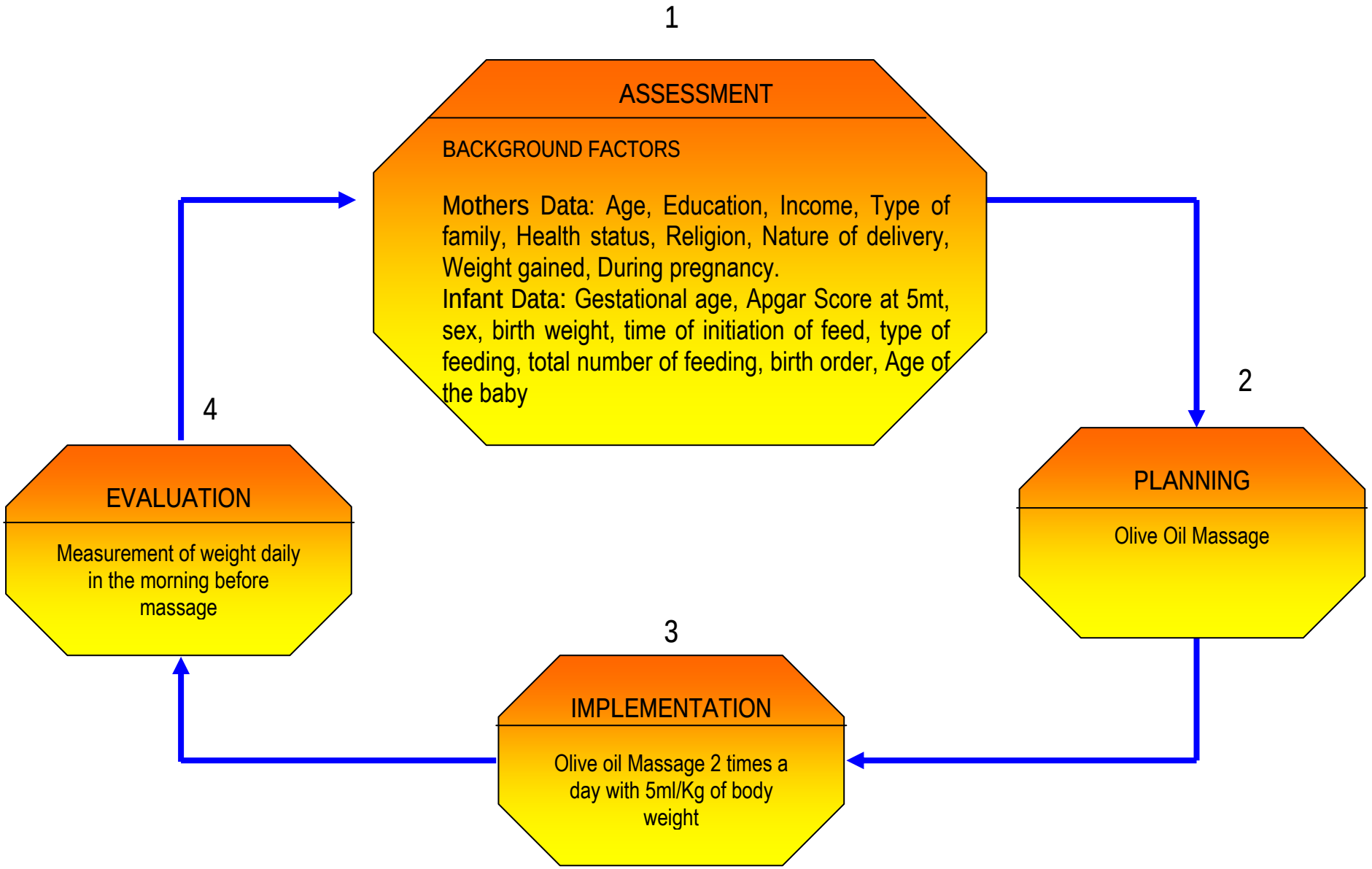

Fig. 1: CONCEPTUAL FRAME WORK ACCORDING TO NURSING PROCESS MODEL

CHAPTER – II

REVIEW OF LITERATURE

Review of literature is a key step in research. It refers to an extensive, exhaustive, and systematic examination of publication relevant to required research. Before any research can be started, whether it is a single study or an extended project, a literature review of previous studies and experiences related to the proposed investigation should be done. It helps to contribute new knowledge, insight and general scholarship of the researchers. The relevant literature searched and organized as follows

I. Studies related to infant massage.

II. Studies related to oil massage and weight gain among neonates

I. STUDIES RELATED TO INFANT MASSAGE

Ramasundari B, and A. Judee (2009), measured the effectiveness of coconut oil massage on new borns at Om Sakthi Hospital Krihnagiri. 30 newborns delivered by LSCS, weight more then 2.5kg were conveniently selected pre and post assessment was done by brazeltons neonatal behavioural assessment scale. Neonates were given massage with coconut oil all over the body except face for 20 minutes per day for five days. Statistical analysis standard deviation paired 't' test. The mean difference 1.8 with standard deviation 0.388 and paired 't' value of 8.11which was highly significant at ($P < 0.001$) level in sleeping time, crying spell, the mean difference was 0.9 with standard deviation 0.045 and paired 't' value of 9.0 which was highly significant at ($P < 0.01$) level feeding frequency the mean difference is 1.07 with standard deviation 0.060 and the paired 't' value of 7.44 showed high

level of significance at (P < 0.001) massage therapy on newborns crying spell reduced, feeding frequency increased, sleeping time increased.

Chentil, et.al., (2008) measured to assess the body weight gain of combined acupressure and median massage in premature infants 40 infants were subjected to two groups control group 20, experimental group 20. 15 minutes massage an kneading the points administered to experimental groups three times daily 1 hour before feed. Infant's body weights and the average weigh gain of the infants in the experimental group was 32.7 gram. (SD = 8.1) compared with (27.3 grams, SD = 7.7) in the control group while in the 1st week there was no significant differences in weight gain between the two groups. In the second week, the weight gain observed was significantly higher than that observed in control group.

Lahat.S., et.al., (2007) observed on 10 pre term each infant was given massage three times a day for 15 minutes metabolic measurements were performed by direct calorimeter, using the Delta sac II. Energy expenditure was significantly lower in infants after the day massage therapy period. 59.6 = 3.6 kcal/kg 24 hours, than after the period without 63.1 = 5.4 kcal / kg / 24 hours. (P = 0.05) Energy expenditure is significantly lowered 5 days of massage therapy in metabolically and thermally stable pre term infants. This decrease in energy expenditure may be in part responsible for the enhanced growth caused by massage therapy.

Kanho, et.al. (2006) reported the effects of infant massage on weight, height and mother infant interaction. This study was designed as a control group pre-test – post-test design. Massage programs at health district for 4 weeks. Control group N – 26, experimental group N – 26. By matching the infants age, sex, weight, height and mother infant interaction were measured two times by using video equipment in a room at health centre for 10 minutes. Weight gain and height increases between two groups comparison of the total score of the mother infant interaction between the two groups showed a difference t = 5.21 (P = 0.001) there were also significant difference on maternal response (t = 3.78) (P= 0.001) infant

response t = 5.71 between the two groups. Over all the infant massage facilitates the mother infant interaction for infants and mothers who give massage to there babies.

Chattergy et.al. (2005) conducted a study on infant massage on term normal babies between the age of 1 to 12 months. All the parents were advised to apply a small amount of Nourishing oil using firm but gentle strokes all over the baby. Which was followed by gentle massage .Parents were asked to bring after 7th and 14th day of massage this study observed a significant reduction in the skin dryness, improvement in the softness of the skin, and skin glow. It was noticed that the Nourishing oil was absorbed rapidly, leaving the baby skin soft with a natural, healthy glow and without any greasy after feel. These beneficial effects might have been due to the synergistic actions skin nourishing, emollient, moistening, soothing, antimicrobial, anti inflammatory and anti oxididant of its ingredients.

Tachan, et.al., (2005) observed a study to assess the effect of infant massage on weight gain, physiological and behavioral responses in premature infants. Sample size was 26. 13 in experimental group and 13 in control group. Infants with gestational age less than 36 weeks at birth, birth weight less than 200grm and no congenital anomalies. The experimental group received the massage intervention twice daily for 10 days. The vagal tone was significantly higher after massage than before massage group. While no change in control group. The experimental group had higher scores for awake state and motor activity than the control group. The experimental group had significantly higher scores for awake state and motor activity than the control group. Significantly greater awake state. Increased motor activity was reported after massage than before massage. Result of this study showed that massage therapy might enhance optimal physiological responses and behavioral organization of premature infants. .

Diego.M, et.al., (2005) conducted a study to assess weight gain among pre term babies after massage. The massaged pre term neonates did not consume more calories than

the control neonates, massage increased induced vagal activity which in turn may lead to increased gastric motility and sympathetic and parasympathetic nervous system activity in response to therapy group gained more weight gain than massage therapy massage control group

Ferber, et.al., (2005) observed the effects of massage therapy on the mother –infant relationship. Mother and infant were placed into one of three groups. The mothers group was the one in which the mothers performed the massage therapy. The staff group was female research assistance performed the massage therapy. Control group infants did not receive massage. Each infant received a massage daily for 10 days. Mothers and research assistants were given training before hand on proper massage technique. After completing massage therapy. Each mother and infant pair were observed in a play situation. These interactions were coded according to the coding interactive Behavior Manual, a global rating system of parent-child interactions. The infant and mothers in the mothers and staff group had improved mother-infant interactions and increased the social involvement of the infant. This helps establish a more direct benefit of massage.

Funden E (2002) observed massage therapy by mothers and trained professionals enhances weight gain in pre term infants study comprised 57 healthy pre term infants assigned to three groups, two treatment group, one group mothers administered the massage other group professional female figure unrelated to the control group over the 10 day study period the two treatment groups gained significantly more weight compared to the control group 291.3 and 311.3 Vs 225.5 grams respectively. Caloric intake /kg did not differ between group. Mothers are able to achieve the same effect size as that of trained professionals.

Talton, et.al., (2000) explains on touch of all kinds is therapeutic .Also explains that touch is an element that can create a warm, caring and patient friendly atmosphere. Talton explains touch as two types. Task touch and caring touch where former is what occurs when

there is a physical need. Touch is an important way to establish a good nurse patient relationship. Author says that touch is important for every one, but is more important for a new born infant as it will contribute or enhance growth and development deprivation of touch in infancy and child hood may result in many behavior problems in later life. It may also result in retardation of growth and development and also set in a feeling of rejection of not being loved or wanted by anyone.

Bramnone J (2000) conducted a study to assess the effectiveness of gentle touch, and massaging the healthy term and medically stable infants. Findings revealed that massaging babies could elicit cutaneous, proprioceptive, vestibular and sensory gestation and it ultimately provides stimulation, organization, communication and emotional exchange. By constant massaging, infants have shown less behavioral distress, more quiet sleep improvement in body weight, reduction in stress and improvement in maternal infant bonding.

II. STUDIES RELATED TO OIL MASSAGE AND WEIGHT GAIN AMONG NEONATES

Gongzalez et.al., (2009) in a randomized controlled study observed sixty clinically stable pre term new born with a corrected gestational age of 30 to 35 weeks receiving enteral nutrition in the hospital nursery 30 were assigned at random oil massage twice day for 10 days. Plus usual nursery care, control group received usual nursery care alone Weight, head circumference, caloric intake, and nutritional method were recorded daily. Group characteristics were compared with analysis of variance, t-test, and chi square test. There were no differences between groups in gender, gestational age, initial weight, head circumference and caloric intake and type of nutrition at baseline. Infants receiving massage had a larger at baseline. Infants receiving massage had a larger weight gain. (188.2= 41.20 gr/kg versus 146.7 = 56.43 gr/kg)p < 0.001). Hospital stay was shorter in infants receiving

massage and usual nursery care (15.63 = 5.41 day, 19.33 = 7.92 days, (P = 0.01). The addition of parent administered oil massage to usual nursery care resulted in increased weight gain and shorter hospital stay. Difference in weight gain between the two groups. In the second week the weight gain observed in the experimental group was significantly higher than that observed in the control group. Acupressure and meridian massage have a significant effect on weight gain in premature infants.

The stimulated infants averaged forty seven percent greater weight gain per day, they where More awake, and active a greater percentage of the behavior time and mature habituation, orientation motor activity and range of state behavior. Stimulated infants were less hospitalized than control group. Study shows that massaged infants showed better weight gain and matured motor activity than control group.

Jhansi.B. (2006) observed a quasi experimental study at st Johns medical college hospital Bangalore to assess the effect of coconut oil massage on 64L B W babies study conducted in neonatal intensive care unit and obstetric wards they were randomly assigned to experimental (n=32) control (n=32) control group received routine nursing care experimental group received 5 minutes of coconut oil 5ml/kg/day massage twice a day after 30- 40 minuets feed massage was given by occupational therapist for a period of 5 days data analyzed using both descriptive and inferential statistics Mean SD student t test chi- square values ANOVA Fishers exact probability and co efficient co relation were used to analyze the data. oil massage was found to be feasible, safe and cost effective. There was no significant change in weight neurobehavioral response of babies in experimental and control group shows there is marginal improvement in mean in experimental group showed more improvement in attention and habituation.($P<0.05$) the study revealed that there was a significant difference in attention and habituation.

Arora.J., et.al., (2005) reported a randomized controlled trail on 62 Low birth weight preterm neonates weighing 3.3pounds born at less than 37 weeks gestation At Loknayak Jai Prakash Narayan Hospital in New Delhi neonates were assigned to three groups massage with sun flower oil one and half teaspoon /kg / day in each session. Massage with out oil and no massage. both groups were treated four 10 minutes massage daily starting at neck to the waist each limb was then massaged separately in the supine position. Each area received 20 gentle strokes infants in the no massage group were handled and fed in the same way but no massage was given Baseline weight was recorded weight was measured weekly during treatment infants in the treatment group gained an average of 0.8 pounds. No massage groups gained an average of 0.627 pound that oil massage improves weight gain among neonates oil application may have a potential to improve over all growth.

Sankaranarayana.K,, et.al., (2005) observed an open randomized controlled study of oil massage in 224 neonates at LTM medical college Mumbai oil Massage using coconut oil versus mineral oil among new born babies weighing between 1500 to 2000 gram and term babies weighing more than 2500 grams massage were given by a trained person from day 2 of life to 31 days. Setting premature unit and post natal wards babies in each group were randomized to receive massage with coconut oil, mineral oil. or with placebo. Oil massage was given in prone and supine position to include head, neck, trunk and extremities. At the end of the massage kinesthetic stimulation was provided in supine position by passive flexion and extension movements of limb at each large joint massage was given up to 31 days the out come was assessed by the Brazeltonscore at baseline day 7 and on 31 coconut oil massage showed a greater weight gain velocity as compared to mineral oil and placebo pre term infants receiving coconut oil massage also showed a greater length gain velocity compared to placebo group no statistically significant difference was observed in the neurobehavioral assessment between all three subgroups in term babies as well as in preterm babies.

Schanbery (1993) measured a study among 93 pre term infants, the mean gestational age infants was 30 weeks, the mean birth weight was 1204 grams and mean duration in the intensive care was 15 days. All the babies were randomly assigned to massage therapy group and control group. 50 babies in the treatment group received daily 15 minutes massage for 10 days. The massage therapy infants gained weight significantly than the infants in the control group, records revealed that babies who had experienced more complications before the study benefited more from the massage therapy. Using these parameters, they predicted that 87% of the infants benefit significantly from the massage therapy.

CHAPTER – III

METHODOLOGY

This chapter deals with description of the different steps undertaken by the investigator for the study. It includes the research design, variables, setting, population, sample size, sampling technique, sampling criteria, description of the tool, content validity, pilot study, data collection procedure and plan for data analysis and ethical consideration.

RESEARCH DESIGN

Evaluative research is an applied form of research that involves how well a program, practice, procedure or policy is working. It involves the collection and analysis of information relating to the functioning of a program or intervention with aim of assessing the effectiveness. (Polit, 1999).

The selection of research approach is a basic procedure for conducting research study. In view of nature of the problem selected and the objectives; an evaluative research was considered as an appropriate research approach for the present study.

The research approach in this study was a quasi experimental design. To be specific repeated measure design to evaluate the weight gain after repeated olive oil massage there were two groups. Experimental and control group. The control group was similar to experimental group with regard to gestational age, birth weight and other selected factors. The experimental group included those neonates were different from control group only with regard to olive oil massage.

RESEARCH DESIGN NOTATION

Ex: O_1 x O_2 x O_3 x O_4 x O_5 x O_6 x O_7 x O_8 x O_9 x O_{10}

C - O_{11} - O_{12} - O_{13} - O_{14} - O_{15} - O_{16} - O_{17} - O_{18} - O_{19} - O_{20} -

E	=	Experimental group
C	=	Control group
X	=	Intervention
-	=	No intervention
O_1 – O_{10}	=	Post test in experimental group
O_{11} – O_{20}	=	Post test in control group

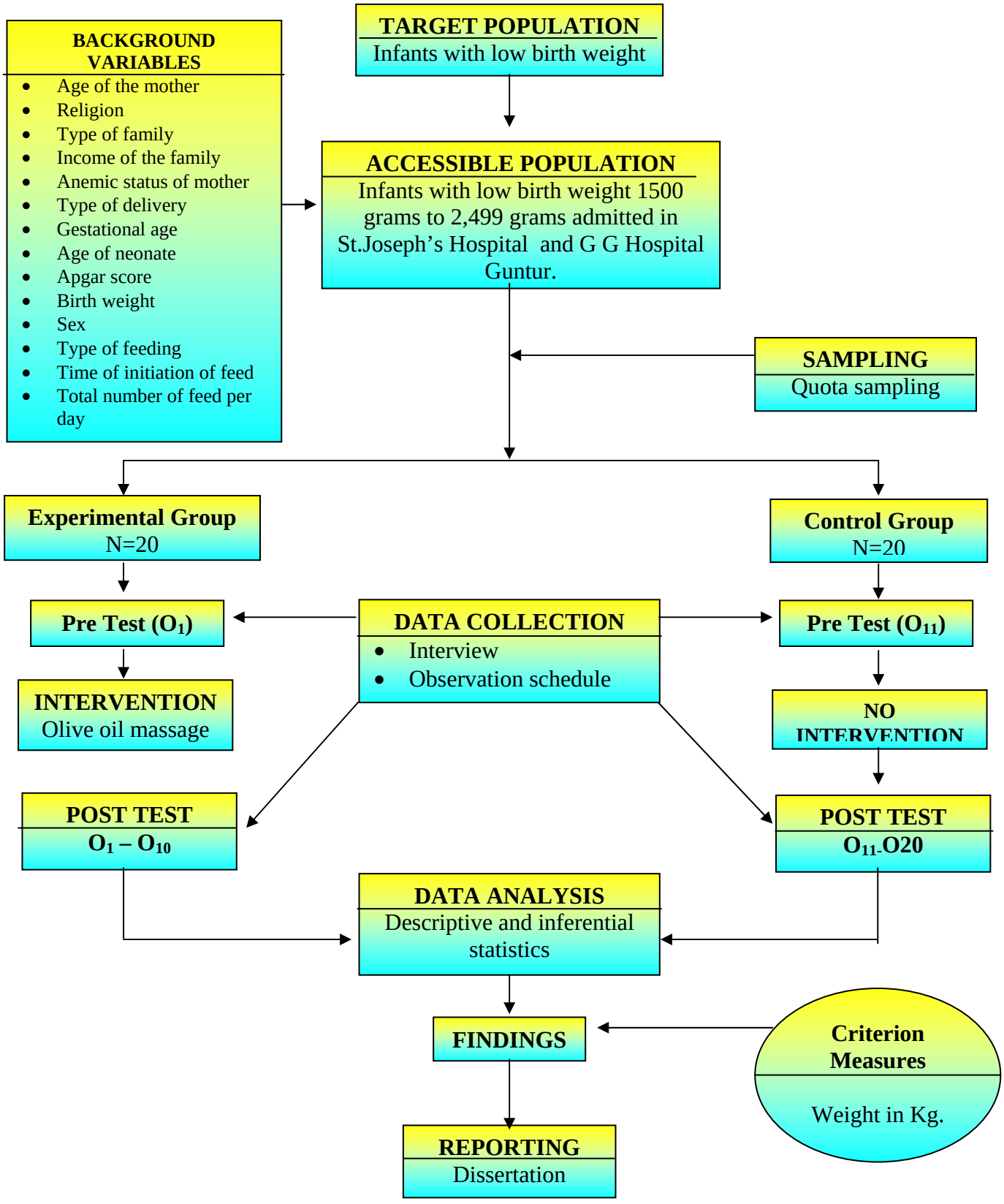

Fig. 2: SCHEMATIC REPRESENTATION OF RESEARCH

SETTING OF THE STUDY

It is essential for the researcher to consider the setting in which for the experimental group treatment is conducted. The study was conducted in NICU at St.Joseph's Hospital, and G G Hospital Guntur.

VARIABLES

The variable discussed in this study were,

Independent variable: Olive oil massage

Dependent variable: Weight gain.

POPULATION

Target population refers to the population that the researcher wishes to make a generalization. In this study the target populations were the infants with low birth weight neonates.

Accessible population refers to the aggregate of cases which confirm to the designed criteria and which is assessable to the researcher as the pool of subject or object. In this research the assessable populations were infants with low birth weight neonates admitted in NICU,' St.Joseph's General Hospital, , and Government General hospital Guntur.

SAMPLING TECHNIQUE

It is the process of selecting subject from a population in order to obtain information regarding a phenomenon in a way that represents the entire population. In this study researcher selected infants with low birth weight neonates by quata sampling method.

SAMPLING CRITERIA

In sampling criteria the researcher specifies the characteristics of the population under the study by detailing the inclusion and exclusion criteria. Inclusion criteria are characteristic that each sampling element must possess to be included in the sample. Exclusion criteria are characteristics that could confound or contaminate the results of the study therefore such participants are excluded from the study.

INCLUSION CRITERIA

1. Neonates who are at the age of 0-1 month.
2. Who were admitted at the time of data collection
3. Who were healthy at the time of data collection
4. Whose Parents will give consent for the study on their neonates\

EXCLUSION CRITERIA

1. Neonates weight less than 1.5 kg and more than 2.5 kg.
2. Neonates who were sick or medically unfit.

SAMPLE SIZE

Sample is subset of population that has been selected to represent the population of interest. The sample for the study was infants with low birth weight neonates. The sample size for this study was arbitrarily decided to be forty, twenty for experimental group twenty for control group

DEVELOPMENT OF THE TOOL

The tool is written device that a researcher uses to collect the data. After careful and detailed review of literature The researcher prepared and developed an interview /and observation schedule as tool for present study.

DESCRIPTION OF TOOL

The study tool consisted of three sections:

Section – I : Background Data of Mother

Section – II : Background factors of neonates.

Section - III : Observation schedule on weight of neonates.

Section-I consisted of selected factors such as age of mother, religion, type of family, educational background, income of the family, Hb status of the mother, nature of work, weight gain by the mother during pregnancy type of delivery

Section-II consists of factors of neonates such as gestational age, age in days, sex, birth weight, and condition of the baby at birth, type of feeding, number of feeds / day.

Section-III consisted of a grid to assess the effect of weight gain among low birth weight neonates of the timing of the olive oil massage.

VALIDITY OF THE TOOL

The tool described by the researcher was sent along with the request for validation to 7 experts including 2 pediatricians, and 5 nursing experts. The experts were requested to check for the relevance, sequence, adequacy of language of the tool. The tool was modified according to expert's opinion. The items with 100% agreement were included in the tool. A few items were modified and retained in the tool. The validity of observation by investigator was established from an expert therapist

VALIDITY OF THE INSTRUMENT

Validity of the instrument was done by three nursing experts checking for 10 neonate's weight recording on an same electronic weighing scale and it was found the same value.

VALIDITY OF OLIVE OIL MASSAGE

Validity of olive oil massage was done by three nursing expert's one physiotherapist and Due certification was obtained.

RELIABILITY OF THE TOOL

The reliability of the instrument was established by inter- rater reliability. The tool was administered to 10 individuals simultaneously by 2 nursing personal and the tool was found to be reliable for the study. The obtained r value was 0.99

PILOT STUDY

Feasibility of study was done among 10 infants who were low birth weight neonates after obtaining permission from the authority. The setting was at St Josephs Hospital, Guntur. It helped the researcher to ascertain the feasibility of the designed methodology. The neonates were not included in the main study.

DATA COLLECTION METHOD

Data were collected from St. Josephs General Hospital and GH Guntur prior permission was sought and obtained from authorities Neonates were selected using purposive sampling method neonates from NICU were the study samples. Based on sample selection criteria purposive sampling method was used. The study purpose and method were explained to each mothers informed consent was obtained 20 low birth weight neonates were selected in experimental group and 20 in control group. Background data was collected by interview method pre test weight was observed 20 neonates in experimental group were given olive oil massage 5ml/kg of body weight massage for 15 minutes both in the morning and evening. Daily weight was recorded once a day in the morning and recorded in the grid before oil massage weight was recorded by ward staff to prevent bias by the researcher. Massage was done for 10 days for each neonate.

PLAN FOR DATA ANALYSIS

The data were edited, coded and entered in excel sheet. The data were analyzed using SPSS version 10. A probability of less than 0.05 was considered to be significant. The data was analyzed as follows:

1. Background Data were analyzed using descriptive statistics
2. Test was used to test the difference between the weight among neonates in the experimental control group.
3. Association between mean difference in weight and the Background factors in experimental group was analyzed using Linear Regression

ETHICAL CONSIDERATION

Main study was conducted after obtaining permission from authorities of GG hospital and St.Joseph's Hospital, Guntur. Research problems and objectives were approved by research committee. Purpose of the study was explained to the mothers and consent was taken participants were given freedom to quit from study in between if not willing. No routine care was altered or withheld. No physical or psychological pain was caused.

CHAPTER – IV

DATA ANALYSIS AND INTERPRETATION

Analysis and interpretation of data of this study was done by descriptive and inferential statistics. Analysis was done using SPSS Version 10. A probability value of less than 0.05 was considered to be significant. This chapter deals with analysis and interpretation of data collected on weight gain among low birth weight neonates after olive oil massage.

The objectives of the study where,

1. To compare the pre and post test weight among low birth weight neonates in relation to Olive oil massage in experimental group.
2. To compare the mean difference in the weight between the low birth weight neonates in experimental and control group.
3. To find out the significant difference in weight gain in relation to background factors among low birth weight neonates in experimental group.

The data collected were edited, tabulated, and analyzed interpreted and findings obtained were presented in the form of tables, and diagrams under the following sections.

Section-I	:	Data on Back ground factors of the mothers.
Section-II	:	Data on Back ground factors of low birth weight neonates.
Section-III	:	Data on weight gain of neonates in experimental and control group
Section-IV	:	Data on association between mean difference in weight and background factors among neonates in experimental group.

SECTION-I: DATA ON BACKGROUND FACTORS OF THE MOTHERS

TABLE – 1

Frequency and percentage distribution of mothers regarding background factors

Selected Factors	Experimental (n = 20)		Control (n = 20)		χ^2	Sig. P
	Freq.	%	Freq.	%		
Age of the mother					0.960	P=327 N S
a. 15-24 years	14	70	11	55		
b. 25-34 year	6	30	9	45		
c. 35-44 years						
Religion					0.533	P=766 N S
a. Hindu	14	70	16	80		
b. Muslim	3	15	2	10		
c. Christian	3	15	2	10		
Educational background					0.706	P=188 NS
a. Illiterate	6	30	1	5		
b. Primary	6	30	6	30		
c. Secondary	4	20	6	30		
d. Collegiate	4	20	7	35		
Anemic Status of the mother	9	45	9	45	0.733	P=693 N S
a. Normal	6	30	6	30		
b. Mild	5	25	5	25		
c. Moderate	0	0	0	0		
d. Severe						
Weight gained during pregnancy	10	50.0	14	70.0	0.921	P=337 N S
a. >10Kg	10	50.0	6	30.0		
b. < 10 Kg						

NS = Not Significant

Table 1, shows the frequency and percentage distribution of mothers of low birth weight neonates.

Regarding age, majority of mothers of low birth weight neonates 14(70%). were in the age group of 15-24 years in experimental group. In Control group majority of mothers 11(55%) were also in the age group of 15-24 years. [$\chi^2 = 0.96$ ($p > 0.05$)]

Regarding religion, majority 14 (70%) were Hindus in experimental group control group majority of mothers 16 (80%) were also Hindus. [$\chi^2 = 0.533$ ($p > 0.05$)]

Regarding educational background, majority 6 (30%) were illiterate in experimental group 6 (30%) had primary and secondary education in control group. [$\chi^2 = 4.79$ ($p > 0.05$)]

Anemic status of mother during pregnancy: Majority of the mothers were 9 (45%) mild Anemic in experimental group. Majority 9 (45%) were also in control group. [$\chi^2 = 0.733$ ($p > 0.05$)]

Regarding weight gain of mother during pregnancy experimental group 10 (50.0%) were in less than 10Kilograms control group 14 (70.0%) were also less than 10 Kilograms weight gain. [$\chi^2 = 0.92$ ($p > 0.05$)]

It was inferred that majority of mothers were in the age group of 15-24 years, belong to Hindu, nuclear family, below poverty line were moderate workers, less than 10 Kilograms weight gain during pregnancy, had L.S.C.S delivery.

Both the group were comparable in relation to selected background factors.

Figure 3, reveals the frequency and percentage distribution of mother regarding type of family.

Regarding **type of family**, majority 14 (70%) were nuclear family in experimental group. Control group 16 (80%) were also in nuclear family. [$\chi^2 = 0.533$ ($p > 0.05$)]

It was inferred that majority of mothers were in nuclear family in experimental and control group.

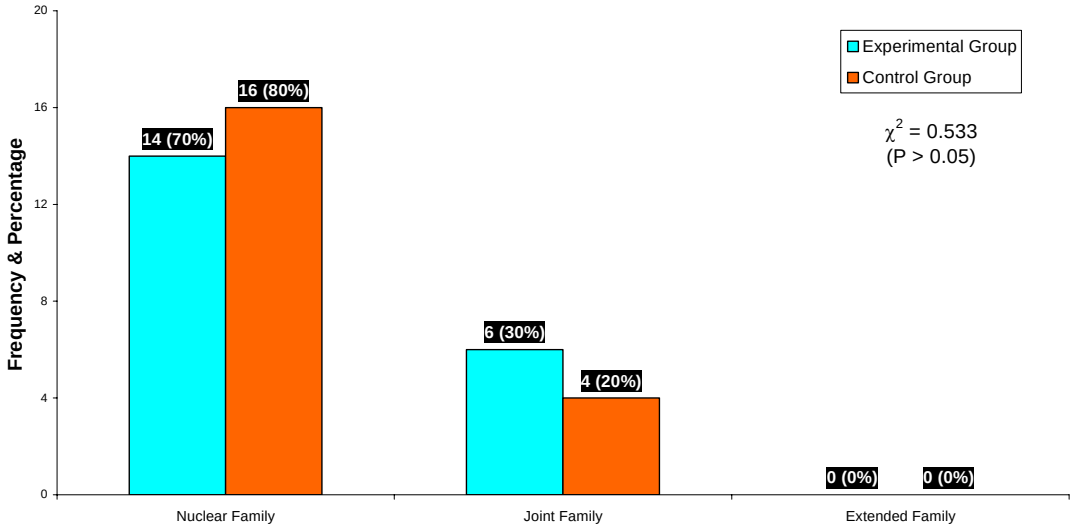

Fig. 3: Frequency and percentage of mother regarding type of family

Figure 4, reveals the frequency and percentage distribution of mother regarding income of the family per year.

Regarding income of the family per year, majority 15 (75%) were in below poverty line in experimental group. 12 (60.0%) in control group were below poverty line [χ^2 = 2.31 ($p > 0.05$)]

It was inferred that majority of the mothers were in below poverty line in experimental and control group.

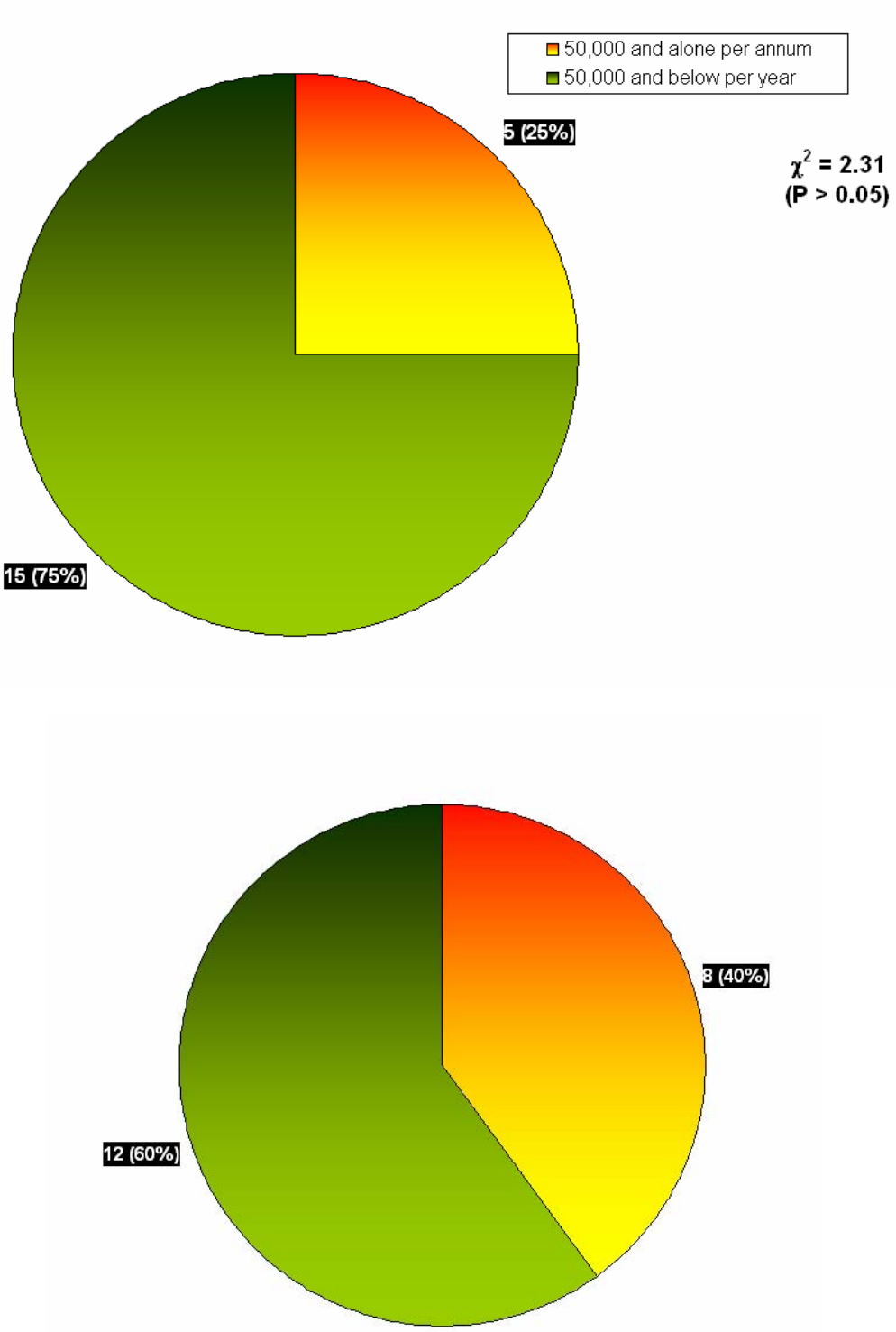

Fig. 4: Frequency and percentage of mother regarding income of the family per year

Figure 5, reveals the frequency and percentage distribution of mother regarding their work.

Regarding working condition of mothers, in experimental group 10 (50.0%) control 14 (70.0%) were moderate workers. [χ^2 = 3.7 (p > 0.05)]

It was inferred that majority of mothers were moderate workers in control group and experimental group .

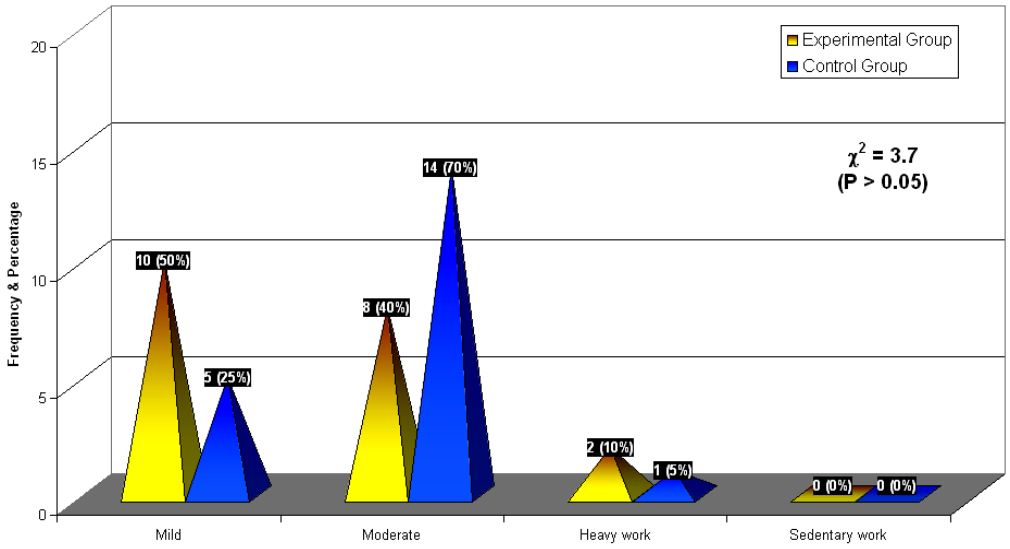

Fig. 5: Frequency and percentage of mother regarding their work

Figure 6, reveals the frequency and percentage distribution of mother regarding type of delivery.

Regarding delivery, experimental group11 (55.0) had normal delivery. 12 (60.0%) had L.S.C.S in control group. Least was 1 (5%) Assisted delivery. [$\chi^2 = 2.27$ ($p > 0.05$)]

It was inferred that majority of the mothers had L.S.C.S in control group in experimental group normal delivery and least mothers had assisted delivery [$\chi^2 = 2.274$ ($p > 0.05$)]

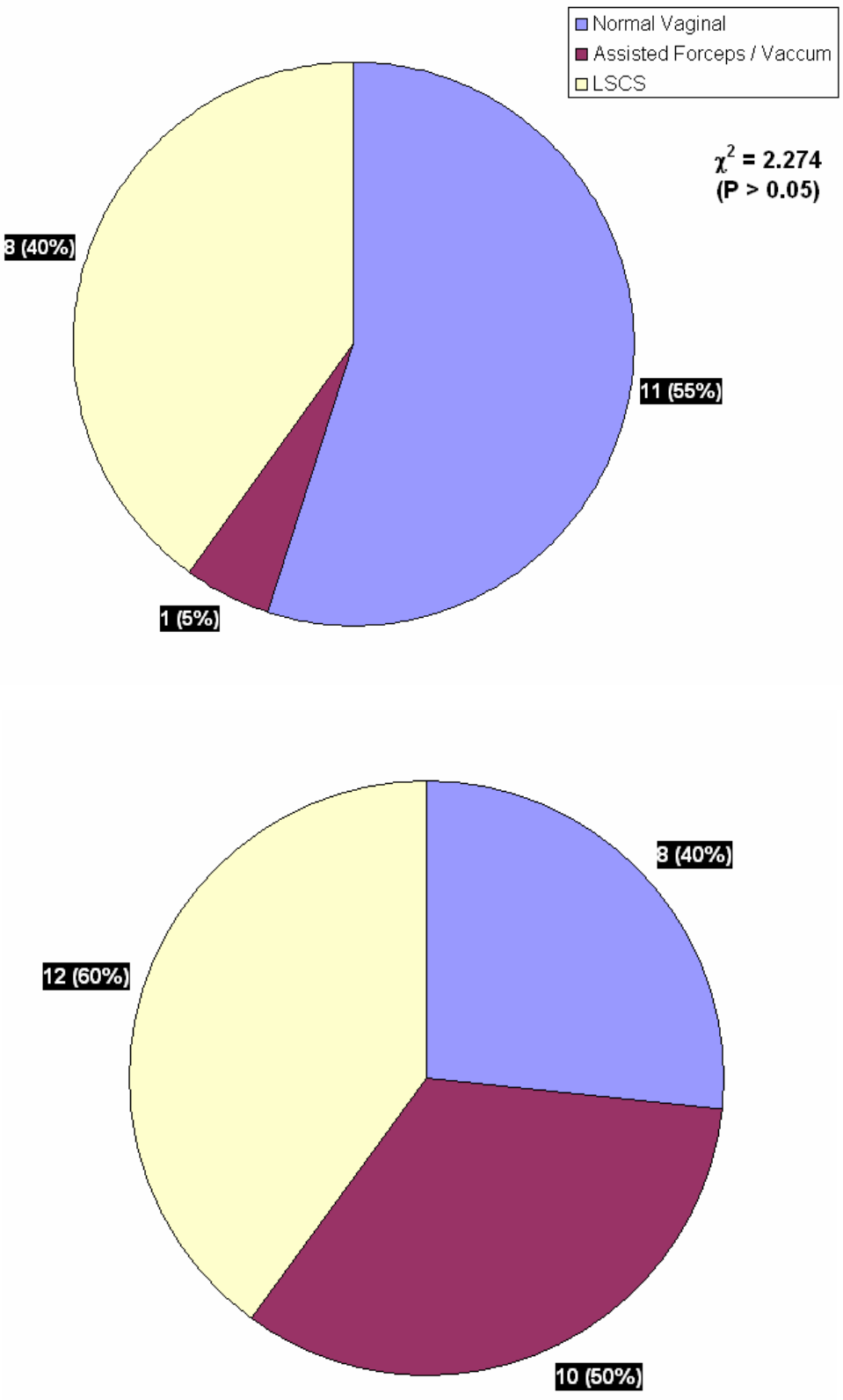

Fig. 6: Frequency and percentage of mother regarding type of delivery

SECTION – 1-B: DATA ON BACKGROUND FACTORS OF NEONATES WITH LOW BIRTH WEIGHT

TABLE - 2

Frequency and percentage distribution of neonates regarding selected background factors

Selected Factors	Experimental (n = 20)		Control (n = 20)		χ^2	Sig. P
	Freq.	%	Freq.	%		
Gestational age of the infant at birth.					2.667	P = 102 N S
a. < 37 Weeks	10	50	5	25.0		
b. ≥ 37 weeks	10	50	15	75.0		
Age of the infant					4.286	
a. 0-6 days	11	55	17	85.0		
b. 7- 14 days	9	45	3	15.0		
Sex of the infant					0.11	P=736 N S
a. Male	13	65	14	70.0		
b. Female	7	35	6	30.0		
Condition at birth					5.2	P=0.07
a. Apgar (4-6/minit)	8	40	2	10.0		
b. Apgar 7-10/mimt)	12	60	18	90.0		N S
Birth order					1.231	(P=540) NS
a. 1st child	14	70	12	60.0		
b. 2nd child	6	7	7	35.0		
c. 3rd child	0	0	1	5.0		

Table 2 shows the frequency percentage distribution of selected factors of low birth weight neonates. Regarding gestational age of the infant 10(50%) in the gestational age of < 37 weeks 15(75%) age of the infant 17 (85%) were in the 0-6 days. Sex of the infant 13(65%) 14(70%) were male. Condition at birth 12(60)18(90) were in the apgar 7-10/minit.Birth order 14(70)12(60) were in the 1st order least was in 3rd order obtained x^2 1.231(.p=540) was not significant.

It was inferred that majority of neonates were more than 37 weeks gestation, less than 6 days of age, male infants, Apgar 7-10/mint Birth order 1st child.

Figure 7, reveals the frequency and percentage distribution of birth weight of infant at birth.

Regarding **birth weight of infant at birth**, majority of infants in experimental group 11 (55%) and control group 13 (65%), weighed between 2001-2005 grams.

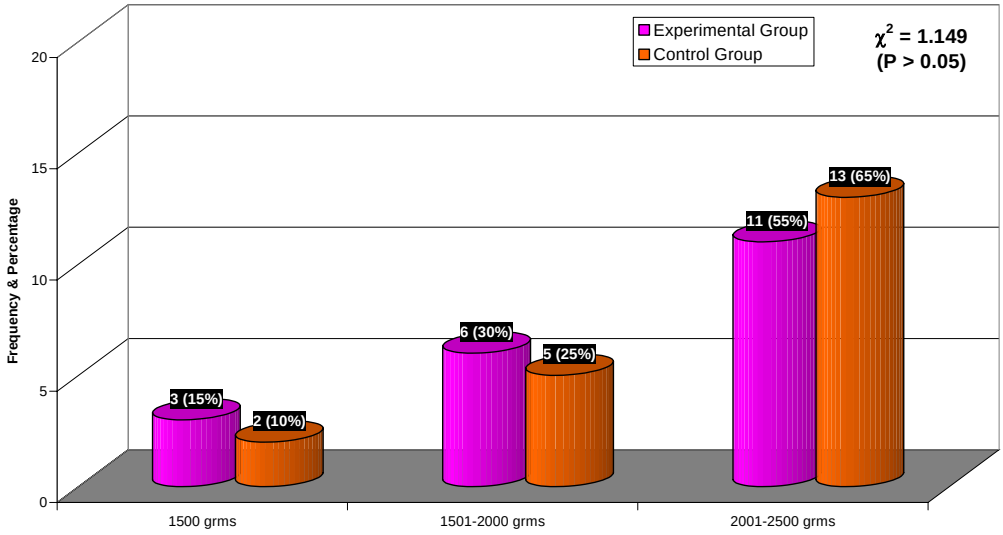

Fig. 7: Frequency and percentage of birth weight of infant at birth

Figure 8, reveals the frequency and percentage distribution of type of feeding.

Regarding **type of feeding**, majority of infants in experimental group and control group 9 (45%) were fed by expressed breast milk (palada feed).

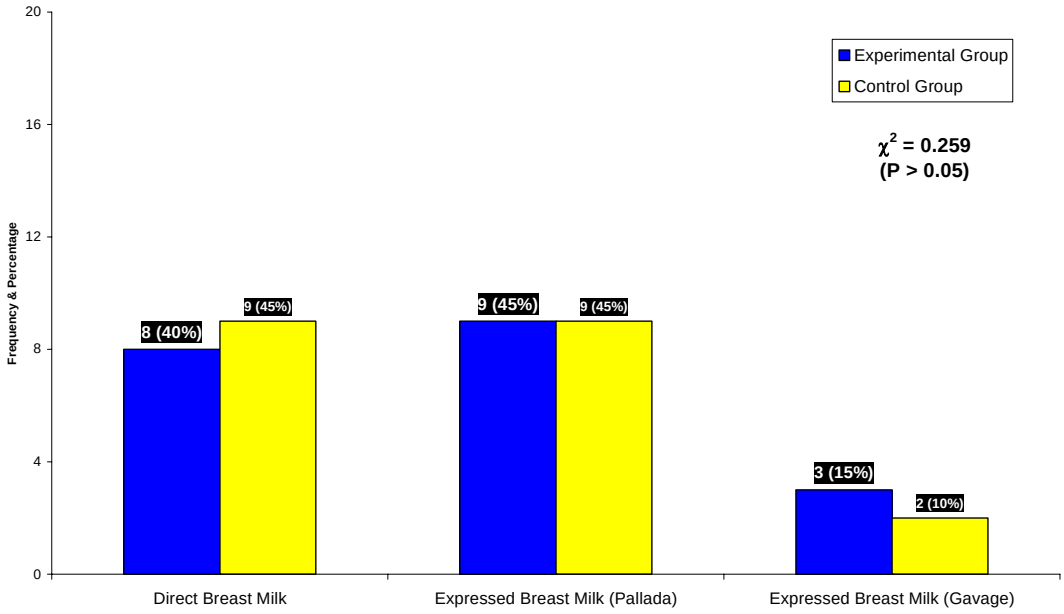

Fig. 8: Frequency and percentage of type of feeding

It was inferred that majority of the infants in both the groups were fed by expressed breast milk by pallada.

Figure 9, reveals the frequency and percentage distribution of time of initiation of feeding.

Regarding time of initiation of feeding, majority of infants in experimental group 10 (50%) and in control group 7 (35%) were given feed between ½ - 2 hours after birth.

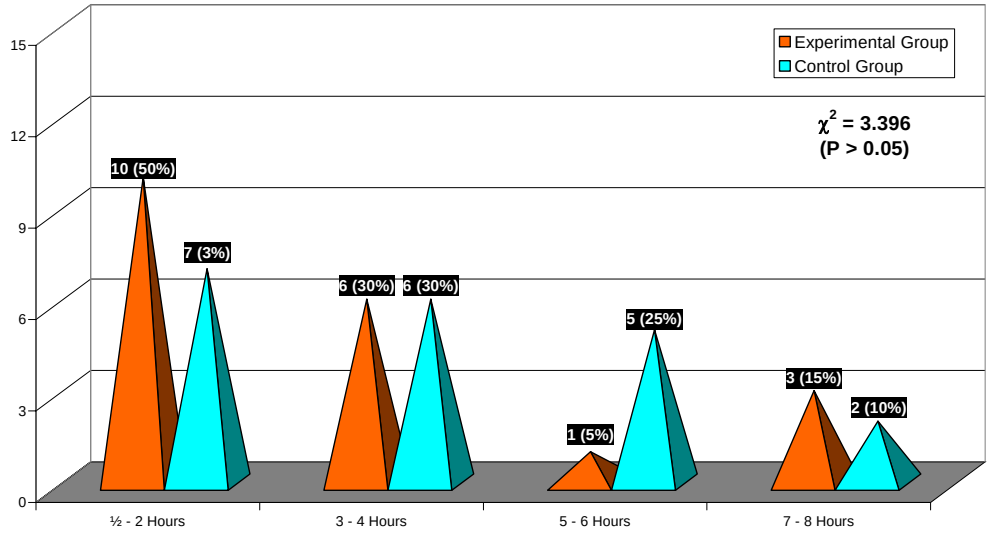

Fig. 9: Frequency and percentage of initiation of feeding

It was inferred that majority of the neonates were feed between ½-2 hours after birth.

Figure 10, reveals the frequency and percentage distribution of total number of feeds.

Regarding **total number of feeds**, majority of infants in experimental group 10 (50%) had 4 – 5 feeds and control group 12 (60%) had 6 – 8 feeds.

It was inferred that neonates in control group had more number of feeds per day

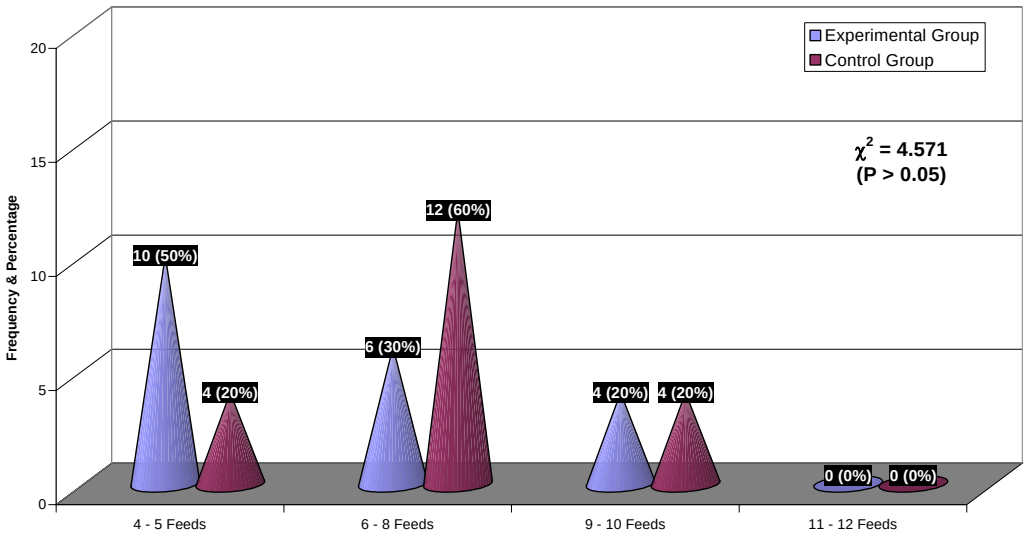

Fig. 10: Frequency and percentage of neonates regarding total number of feeds per day

SECTION – III: DATA ON WEIGHT AMONG LOW BIRTH WEIGHT NEONATES IN EXPRIMENTAL AND CONTROL GROUP

For the purpose of this study the following null hypothesis was stated.

H_{01} : There will be no significant difference in mean weight before and after oil massage among low birth weight neonate in experimental group

H_{02} : There will be no significant difference between the mean difference in weight gain among low birth weight neonates in experimental and control group.

TABLE – 3

Mean range, SD, mean difference and 't' value on pre and post test weight among low birth weight neonates in experimental group

n = 20

Weight	*Mean*	*Range*	*SD*	*Mean difference*	*'t' value*
Pre-test	1.9566	0.74	0.2322	0.1529	-11.964 P=(0.001)
Post test	2.1095	0.915	0.2255		

Table-3 shows the Mean, Range, SD, Mean deviation and 't' value regarding the pre-test and overall post test weight among low birth weight neonates. The obtained overall post test mean weight 2.10955 (SD =0.2255)was more than the pretest mean weight 1.9566 (SD = 0.2322). The obtained mean difference was 0.1529 and 't' value -11.964 P =(0.001). There for the null hypothesis H_{01} was rejected

It was inferred that post weight gain had significantly increased in experimental group after oil massage.

TABLE – 4

Mean difference and 't' value regarding weight among neonates in experimental and control group.

Groups	*Weight of neonates*					
	N	*Mean difference*		*SD*	*Difference in mean*	*"t" value P*
Experimental Group	20	0.1529		0.0571	0.098	7. 035 P=(0.001)
Control Group	20	0.0549		0.0248		

Table 4, shows the mean difference Standard deviation and 't' value regarding weight among low birth weight neonates in experimental and control group.

The obtained mean difference of weight is 0.1529(SD=0.0571) in experimental group was more than the control group M=weight 0.0549(SD=0.0248) in control group. There was a significant difference in the mean difference between experimental and control group. There fore, the null hypothesis H_{02} was rejected.

It was inferred that neonates in experimental group significantly improved weight after olive oil massage.

SECTION –IV: DATA ON ASSOCIATION BETWEEN THE MEAN DIFFERENCE IN WEIGHT AND BACKGROUND FACTORS AMONG LOWBIRTH WEIGHT NEONATES.

TABLE – 5

Linear regression regarding the mean difference in weight and background factors among low birth weight neonates in experimental group

Selected background factors	*Standardized Co-efficient Beta*	*'t' Value*	*Sig. (P)*
Age of the mother	2.753	4.462	0.140
Religion	2.330	2.547	0.137
Type of family	2.878	4.571	0.156
Income of the family	3.875	3.997	0.262
Anemic status of the mothers	2.121	-5.057	0.124
Type of delivery	-0.273	-0.408	0.753
Gestational age of the neonate	-0.825	-1.097	0.471
Age of the neonate in days	-3.219	-3.976	0.157
Sex of the neonates	-1.238	-2.502	0.243
Birth weight of the neonates	1.925	2.615	0.233
Total number of feeds	-1.173	-1.881	0.311

Table - 5, reveals the standardized co-efficient and 't' value regarding mean difference in weight and back ground factors among low birth weight neonates based on linear regression.

None of the background factors were associated with the mean difference in weight recorded in experimental group ($p>.05$)

It was inferred that there was no significant association between the mean difference in weight gain and background variables among neonates in experimental group Olive Oil massage was independently effective to increase weight of neonates.

CHAPTER – V

SUMMARY, FINDINGS, DISCUSSION, IMPLICATIONS, LIMITATIONS, RECOMMENDATIONS AND CONCLUSION

The value of any research project lies in reporting its findings, recommendations, limitations of the study, suggestions for studies and nursing implication.

SUMMARY

The primary aim of the study was to assess the effectiveness of Oive oil massage on weight gain among low birth weight neonates.

The objectives of the study were,

- To compare the pre and post test weight among low birth weight neonates in relation to olive oil massage in experimental group.
- To compare the mean difference in the weight between the pre and post weight in experimental and control group,
- To find out the significant difference in the mean weight in relation to selected factors among low birth weight neonates in experimental group.

The study attempted to examine the following research hypotheses.

H_1 : There will be a significant difference in weight before and after Oive oil massage among low birth weight neonates in experimental group

.H_2 : There will be a significant association between the mean differences in weight gain between low birth weight neonates in experimental and control group

H_3 : There will be a significant association between the mean difference in weight and background factors among low birth weight neonates.

A review of literature enabled the investigator to develop the conceptual frame work. Literature review was done for the present study and presented in the following headings. Studies related to infant massage. Studies related to oil massage and weight gain in low birth weight neonates.

The conceptual framework adopted for the present study was based on nursing process model.

This research approach adopted for the study was evaluative in nature. It was a quasi experimental design, pre test post test with non equivalent control group design. Independent variable was olive oil massage and dependent variable weight gain.

The tool developed and used for data collection was a structured interview / observation schedule. The content validity of the tool was established by 7 experts. The reliability of the tool was established by inter rater reliability method. The reliability co-efficient was high (r = 0.99). The pilot study was conducted at St.Joseph's General Hospital, Guntur, among 10 low birth weight neonates who fulfilled sample, selection criteria, who were other than study samples. The study was found to be feasible.

The main study was conducted in the NICU St.Joseph's hospital, Guntur and Government Hospital, Guntur. Prior permission from the authorities was sought and obtained, informed consent was taken from the parents study samples after explaining the purpose of the study. The samples were selected by Quata sampling technique based on sample selection criteria. A total of 40 neonates were recruited in the study. There were 20 in experimental group and 20 in control group. Weight was recorded before the oil massage in experimental

group. Pre and post test weight was recorded with out any intervention in control group. The gap between pre and post test was 9 days. Gathered data were analyzed based on the objectives using inferential and descriptive statistics with SPSS (Version 10) package Level of probability <0.05considerd to be significant.

CHARACTERISTICS OF STUDY SAMPLE

Majority of mothers in experimental and control group were in the age group of 15-24 years, belong to Hindu, nuclear family below poverty line, were moderate workers, had less than 10 Kilograms weight gain during pregnancy, had L.S.C.S delivery, had normal Hb during pregnancy.

Majority of neonates in experimental control group were more than 37 weeks gestation, less than 6 days of age, male infants, Apgar 7-10/mint Birth order 1st child. Birth weight between 2001-2005grams, had expressed breast milk pallada feed, and had initiation of feed between ½- 2 hours after birth.

FINDINGS

The major findings of the study were presented based on the objectives of the study.

Objective – 1: To compare the pre and post test weight among low birth weight neonates in relation to olive oil massage in experimental group.

- There was a significant increase in weight after olive oil massage among low birth weight neonates t =- 11.964 (P = 0.001) in experimental group.

Objective – 2: To compare the mean difference in weight between the pre and post weight among neonates in experimental and control group.

The neonates in experimental group significantly improved weight after olive oil massage. (t = 7.035 (P = 0.001).

- The post test mean weight among low birth weight neonates in experimental and control group was significantly high t – 7.035(P = 0.001) was significant.

Objective – 3: To find out the significant difference in mean weight gain in relation to background factors among low birth weight neonates in experimental group.

- There was no significant association between background factors on mother and neonates and weight gain among low birth weight neonates in experimental group (P > .005).
- The t value=4.462(p=0.140) which was not significant

DISCUSSION

The results of the study were discussed according to the findings of the study.

Finding – 1: Post test mean weight after olive oil massage in experimental group

There was a significant increase in weight after olive oil massage among low birth weight neonates t =- 11.964(P = 0.001) in experimental group.

- Post test mean weight after olive oil massage in experimental group was significant there was an increase in the mean weight after olive oil massage t = 11.964 (P = 0.001)

The above findings were supported by the studies conducted by Douret v. et.al., (2008) reported that there was a significant increase in weight gain and neurobehaviours development in pre term infants with multimodal stimulation and cutaneous application of vegetable oil. Arora.J., et.al., (2005) reported that oil massage improves weight gain among neonates and oil application may have a potential to improve over all growth.

Finding – 2: Findings on post test weight among experimental and control group.

It was inferred that neonates in experimental group significantly improved weight after olive oil massage.

- Post test mean weight in experimental group was more 0.1529 control group0.0549. There was a significant difference in post test mean, post test mean was 0.1529, there was significance t =7.035p=(0.001)

The above findings were supported by the studies conducted by Sankaranarayana et.al (2005) reported that there was significant increase in weight after oil massage in experimental group than those of control group those who did not. Lahat.S., et.al., (2007) observed that Energy expenditure is significantly lowered 5 days of massage therapy in metabolically and thermally stable pre term infants(P = 0.05) . This decrease in energy expenditure may be in part responsible for the enhanced growth caused by massage therapy.

Finding – 3: Findings on association between the mean differences in weight gain among low birth weight neonates and selected factors among experimental group.

It was inferred that there was no significant association between the mean difference in weight gain and background variables among neonates in experimental group Olive Oil massage was independently effective to increase weight of neonates.

- There was no significant association between background factors among low birth weight mothers and neonates P value was P > 0.5.

IMPLICATION

The findings of the study have the following implications in nursing.

Implication to Nursing Practice

- Olive oil massage is an effective measure to increase weight in neonates. Nurses can use this procedure as effective measure among low birth weight neonates.
- Olive oil massage will reduce the hospital stay among low birth weight neonates.
- Increases immunity of the infant ,increases parental bond with the newborn
- Olive oil massage can be used as a part of nursing management of low birth weight neonates in hospital and community setting.
- Olive oil massage can be an adjunct therapy to gain weight.

LIMITATIONS

- Pilot study was done for only 1 week.
- Period of olive oil massage was only for 10 days.

RECOMMENDATIONS

- A similar study can be conducted in large group of low birth weight neonates.
- A longer period of intervention can be studied for more reliability and effectiveness.
- It can be practiced in the community settings and hospital setting

CONCLUSION

The findings of the study showed that there was a significant ($p<0.05$) weight gain in low birth weight neonates after Olive oil massage in experimental group no selected background factors had any significant association. The conclusion of the study was that olive oil massage was effective in weight gain among low birth weight neonates.

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APPENDIX – I

PERMISSION LETTER

From
30083611,
II year M.Sc (nursing),
Annai J.K.K Sampoorani Ammal College of Nursing,
Komarapalyam – 638183,

To

Through

The Dean,
Annai J.K.K Sampoorani Ammal College of Nursing,
Komarapalyam – 638183,

Respected Sir/ Madam,

Sub: Seeking permission to conduct the Research Study – regarding

I am 30083611, II year M.Sc.,Nursing student of Annai J.K.K Sampoorani Ammal College of Nursing Komarapalyam, under the Tamil Nadu Dr.M.G.R Medical University, Chennai. As a partial fulfillment of University requirement for a award of Master of Science in Nursing Degree, I am conducting a research on the following topic: "A study to asses the effectiveness of olive oil massage and weight gain among neonates at selected hospital, Guntur, A.P". I would like to conduct the research in your esteemed institution. Please grant permission for the same.

Thanking You.

Yours sincerely,

Place:

Date:

(30083611)

APPENDIX – II

LIST OF EXPERTS

1. Dr.N.V.L.S. RAJU,
   D.C.H., D.N.B., Pediatric,
   I.C.H. Chennai,
   R.No. 39239,
   R.Agraharam, Guntur.

2. SENTHILPRAKASH, D.C.H., D.N.B.,
   Hari Sakthivel Hospital,
   Pallipalayam,
   Erode.

3. Mrs.ALAMELU,
   Principal,
   Pioneer School of Nursing,
   Hyderabad..

4. Mrs.KAVIMANI,
   Principal,
   S.P.M. College of Nursing,
   Erode.

.5. Sr.MERCY.J.M.J.,
   Principal,
   St.Joseph's School of Nursing,
   Guntur, A.P.. .

6. K.SAMATHA JYOTHI,
   Vice Principal,
   Sri Narayana College of Nursing,
   Chinta Reddy Palem,
   Nellore – 524 002, Ap

7. Mrs.REJESWARI
   ,Associate Professor,
   Narayana College of Nursing,
   Chinta Reddy Palem,
   Nellore – 524 002, A.P.

APPENDIX – III

CONTENT VALIDITY CERTIFICATE

I hereby certify that I have validated the tool of 30083611, M.Sc., (N), student who is undertaking "A study to asses the effectiveness of olive oil massage and weight gain among neonates at selected hospital, Guntur, A.P.

Place: Komarapalayam. Signature of the Expert

Date: Designation

APPENDIX – IV

PERMISSION LETTER TO CONDUCT THE RESEARCH STUDY

J.M.J

☎ : 0863 - 2322700, 2320386, Fax : 0863 - 2338158
ST. JOSEPH'S GENERAL HOSPITAL
GUNTUR - 522 004 (A.P.)
E-mail : stjh_gnt@yahoo.com

Date : 14.09.2009

To,
The Dean,
Annai J.K.K.Samoorani Ammal College of Nursing,
KOMARAPALYAM – 638183.

Respected Sir / **Madam**,

No.**30083611** M.Sc.Nursing student of Annai J.K.K.Sampoorani Ammal College of Nursing wanted to do her Research on " A Study to asses the effectiveness of olive oil massage and weight gain among neonates" at our St.Joseph's hospital, Guntur, Andhra Pradesh. We have no objection 30086311 can complete her research on her topic in our hospital.

Thanking You,

Yours Sincerely,

for Sr Rgaming
(Sr.Jayaseela)

ADMINISTRATOR
ST. JOSEPH'S HOSPITAL
GUNTUR – 522 004
A.P. (S. INDIA)

APPENDIX – V

CERTIFICATE FOR OIL MASSAGE PROCEDURE

Ph : 0091 - 04288 - 260032, 260588, Fax : 266760

J.K.K.MUNIRAJAHH MEDICAL RESEARCH FOUNDATION

COLLEGE OF PHYSIOTHERAPY

Ethirmedu, **B.Komarapalayam - 638 183.** Namakkal Dist, Tamilnadu, India.

Rtn. PHF. **Dr. J.K.K.MUNIRAJAHH** M.Tech., (Bolton)
Correspondent

22.09.2009

CERTIFICATE

This is to certify that 30083611 II Year M.Sc Nursing has been taught the Infant Massage Technique in department of physiotherapy under the supervision of **Mrs.M.P.THENMOZHI,** B.P.T. MIAP., from **19.09.2009 to 22.09.2009**.

H.O.D.
Exercise Therapy & Massage

18/9/09.
PRINCIPAL

PRINCIPAL,
COLLEGE OF PHYSIOTHERAPY,
I.K.K. Munirajahh Medical Research Foundation
KOMARAPALAYAM-638 183,
TAMIL NADU, INDIA.

APPENDIX – VI

INTERVIEW /AND OBSERVATION SCHEDULE ON WEIGHT GAIN AMONG LOW BIRTH WEIGHT BABIES WITH OIL MASSAGE.

SECTION - I

BACKGROUND DATA OF THE MOTHER

Instruction

This section seeks information about you. There is no right or wrong response. Kindly put tick (✓) mark against the correct response, which best suits mother. The interviewer will pose the questions and read the responses one by one.

1. Age of the Mother

   a. 15-24 years ☐

   b. 25-34 years ☐

   c. 35-44 years ☐

2. Religion

   a. Hindu ☐

   b. Muslim ☐

   c. Christian ☐

3. Type of family

   a. Nuclear family ☐

   b. Joint family ☐

   c. Extended family ☐

4. Educational Background

a. Illiterate ☐

b. Primary ☐

c. Secondary ☐

d. Collegiate ☐

5. Income of the family Rs. _____ per month

a. Above poverty line 50,000 and above per annum ☐

b. Below poverty line 50,000 and above per annum ☐

6. Anaemic status of the mother during AN period _____ / Hb

(Note from record)

a. Normal ☐

b. Mild ☐

c. Moderate ☐

d. Severe ☐

7. Work of the mother

a. Mild work ☐

b. Moderate work ☐

c. Heavy work ☐

d. Sedentary work ☐

8. Weight gained during pregnancy

a. > 10 kg ☐

b. < 10 kg ☐

9. Type of delivery

a. Normal vaginal ☐

b. Assisted (forces / vaccum) ☐

c. LSCS ☐

SECTION – II

BACKGROUND DATA ON NEONATES

Instructions:

The interviewer is requested to pose the question and the choice one by one and put a tick mark against by the investigator.

1. Gestational age of the infant at birth (Note from record)

a. < 37 weeks ☐

b. 37 weeks ☐

2. Age of the infant (in days)

a. 0-6 days ☐

b. 7-14 days ☐

c. 15-21 days ☐

3. Sex of the infant

a. Male ☐

b. Female ☐

4. Birth weight of the infant at birth

a. 1500 gms ☐

b. 1501-2000 gms ☐

c. 2001-2500 gms ☐

5. Condition of the baby at birth min.

a. Apgar 4-6 / min ☐

b. Apgar 7-10 / min. ☐

6. Birth order

a. 1st child ☐

b. 2nd child ☐

c. 3rd or more ☐

7. Type of feeding

a. direct breast milk feeding ☐

b. Expressed breast milk (pallada feed) ☐

c. Expressed breast milk (gavage) ☐

8. Time of initiation of feed

a. ½ – 2 hours after birth ☐

b. 2 – 4 hours after birth ☐

c. 5 – 6 hours after birth ☐

d. 7 – 8 hours after birth ☐

9. Total number of feeds per day

a. 4-5 feeds ☐

a. 6-8 feeds ☐

c. 9-10 feeds ☐

d. 11-12 feeds ☐

SECTION – III

OBSERVATION SCHEDULE ON WEIGHT GAIN

Instruction:

The observer measures the weight of the infant before oil massage once a day, every day and fills the appropriate space. The amount of oil used also will be entered in the appropriate column.

Name or number of the neonate: _____

Weight: _____

Date of birth

Date & Time															
Weight (in Kg)															
Olive oil (in ml)															

Date & Time															
Weight (in Kg)															
Olive oil (in ml)															

Signature

APPENDIX – VII

తక్కువ బరువుగల శిశువులు బరువును పెంపొందించుకునే ఇష్టాగోష్ఠి / పరిశీలనా పథకము

విభాగము – 1
తల్లియొక్క పూర్వ విషయాలు

సూచన:

ఈ విభాగము నిన్ను గూర్చి నీ వివరణను తెలియజేస్తుంది. ఇచ్చే సమాధానములో తప్పొప్పులకు తావులేదు. తల్లికి సరిపోయే సమాధానాన్ని ఎదురుగా వున్న కుండలీకరణములో దయచేసి గుర్తుపెట్టండి. ఇష్టాగోష్ఠి నిర్వాహకుడు ప్రశ్నలు అడుగుతూవుంటే, ఒక దాని తరువాత మరొకదానికి సమాధానము చెప్పండి.

1. తల్లి వయస్సు:
   - ఎ) 15–24 సంవత్సరాలు ☐
   - బి) 25–34 సంవత్సరాలు ☐
   - సి) 35–44 సంవత్సరాలు ☐
2. మతము:
   - ఎ) హిందు ☐
   - బి) మహమ్మదీయ ☐
   - సి) క్రైస్తవ ☐
3. కుటుంబం చెందినది:
   - ఎ) చిన్న కుటుంబం ☐
   - బి) ఉమ్మడి కుటుంబం ☐
   - సి) సమిష్టి కుటుంబం ☐
4. విద్యా సంబంధ పూర్వ పరిచయము
   - ఎ) నిరక్షరాస్యురాలు ☐
   - బి) ప్రాథమిక విద్య ☐
   - సి) మాధ్యమిక విద్య ☐
5. కుటుంబ ఆదాయము
   - ఎ) దారిద్ర్య రేఖకు ఎగువన, సంవత్సరమునకు 50,000రూ. పైన ☐
   - బి) దారిద్ర్య రేఖకు దిగువన, సంవత్సరమునకు 50,000రూ. పైన ☐

6. తల్లి యొక్క రక్త హీనత పరిస్థితి (రికార్డు ప్రకారం)

ఎ) సాధారణ స్థితి ☐

బి) అల్పం ☐

సి) మధ్యస్థం ☐

డి) అధికం ☐

7. తల్లి చేసే పని

ఎ) అతి తక్కువ ☐

బి) మధ్యస్థం ☐

సి) అత్యధికం ☐

డి) పనిలేకుండా ఉండడం. ☐

8. గర్భధారణ సమయంలో పెరిగిన బరువు

ఎ) 10 కిలోలు ☐

బి) 10 కిలోలు ☐

9. ప్రసవ విధానము

ఎ) సాధారణం ☐

బి) పరికరాతో ☐

సి) సిజేరియన్ ☐

విభాగము - 2

శిశువును గురించిన విషయ విశ్లేషణ

సూచనలు:

ఇష్టాగోష్ఠి నిర్వాహకుడు ఒకదాని తరువాత మరొకటి ప్రశ్నిస్తూ, వారు చెప్పిన జవాబుకు ఎదురుగా గుర్తు పెట్టవలెను.

1. శిశువు జన్మించునాటికి గర్భస్థ వయసు (రికార్డు ప్రకారం)

   ఎ) 37 వారాలు ☐

   బి) 37 వారాలు ☐

2. శిశువు వయసు (రోజులలో)

   ఎ) 0-6 రోజులు ☐

   బి) 7-14 రోజులు ☐

   సి) 15-21 రోజులు ☐

3. శిశువు లింగము

   ఎ) మగ ☐

   బి) ఆడ ☐

4. శిశువు పుట్టినప్పటి బరువు

   ఎ) 0-1500 గ్రాములు ☐

   బి) 1501-2000 గ్రాములు ☐

   సి) 2001-2500 గ్రాములు ☐

5. శిశువు పుట్టినప్పటి స్థితి

   ఎ) అప్‌గార్ 4 - 6 / నిమిషాలు ☐

   బి) అప్‌గార్ 7-10 / నిమిషాలు ☐

6. శిశువు యొక్క పుట్టుక క్రమము

   ఎ) మొదటి బిడ్డ ☐

   బి) రెండవ బిడ్డ ☐

   సి) మూడవ, ఆపైన బిడ్డ ☐

7. పాల పోషణా విధానము

ఎ) తల్లి స్తన్యము నుండి పాలు ☐

బి) తల్లిపాలు గొట్టము ద్వారా ☐

8. పాల పోషణ శిశువుకు ప్రారంభించిన సమయం

ఎ) పుట్టిన తర్వాత 1/2 - 2 గంటలకు ☐

బి) పుట్టిన తర్వాత 2 - 4 గంటలకు ☐

సి) పుట్టిన తర్వాత 4 - 6 గంటలకు ☐

డి) పుట్టిన తర్వాత 6 - 8 గంటలకు ☐

9. రోజుకు మొత్త మీద పాలు పట్టే సంఖ్య

ఎ) 4 - 5 ☐

బి) 6 - 8 ☐

సి) 9 - 10 ☐

డి) 11 - 12 ☐

విభాగము - 3

బరువును పెంపొందించుకునే పరిశీలనా పద్ధతము

సూచన :

తైలముతో మర్ధన చేయకముందు పరిశీలకుడు, రోజుకోసారి గాని, ప్రతిరోజుగాని, శిశువు బరువుచూసి, దిగువ యివ్వబడిన ఖాళీలలో నింపవలెను. ఎంత తైలాన్ని ఉపయోగిసుత్తన్నారనే వివరణను కూడా పూరింపవలెను.

శిశువు పేరు లేదా నంబరు : .....

తేది & సమయం															
బరువు (కిలోల్లో)															
ఆలివ్ నూనె (మి.లీ)															

తేది & సమయం															
బరువు (కిలోల్లో)															
ఆలివ్ నూనె (మి.లీ)															

సంతకం

APPENDIX – VIII

OLIVE OIL MASSAGE PROCEDURE

PREPARATORY PHASE

- Select the child after 1 hour of feeding
- Set the article in a tray:
  - Olive Oil 5ml /kg of body weight
  - Measuring cup – To measure the oil
  - Polythene sheet – To place the baby
  - Weighing scale – To weigh the baby
  - Observation schedule sheet – To record the procedure
  - Pen – to write

Phase I:

a) Infant will be taken off clothes place the infant on electronic weight scale weigh the baby. Place the neonate on a polythene sheet in a prone position under the radiant warmer.
b) Take measured oil in the palm of the hand of a researcher.
c) Apply it from head to foot, neck shoulder, back down to buttocks, legs posterior.

Phase – II

Four firm strokes with palms of the hands of 5 seconds each, were provided in three areas

a) head from forehead hairline over scalp down to neck with alternate hands;
b) neck from midline outwards with both hands simultaneously;
c) shoulders from midline outwards with both hands simultaneously; and

d) back from nape of neck down to buttocks legs with firm, long stroke with alternate hands.

Phase III:

Place the neonate in a supine position apply oil from forehead, cheeks, neck, chest, abdomen, upper limbs, shoulder to wrist, lower limbs, hips, ankles, heels.

a) forehead - from midline, outwards with both hands simultaneously;
b) cheeks - from side of nose with both hands simultaneously in rotating and clockwise direction;
c) chest "butterfly" stroking from midline upwards, outwards, downwards and inwards back to initiating point;
d) abdomen with gentle strokes;
e) upper limbs (each separately) - from shoulders to wrist using alternate hands for stroking;
f) lower limbs (each separately) - from hips to ankles using alternate hands for stroking;
g) palms from wrist to finger tips using alternate hands for stroking; and
h) soles -from heel to toe tips using alternate hands for stroking.

Phase IV:

This was done in the supine position and consisted of passive flexion and extension movements of the limbs at each large joint (shoulder, elbow, hip, knee and ankle) as 5 events of 2 seconds each in each area.

AFTER THE PROCEDURE

Place the neonate in a supine position on a polythene sheet under the radiant warmer with skin mode of temperature control. They were kept uncovered in the cradles under radiant warmer on a polythene sheet for one hour. It was done to prevent oil being rubbing off. No oil massage to the babies of control group.

APPENDIX – IX

ABSTRACT

A study on olive oil massage and weight gain among low birth weight neonates at selected hospitals St.Joseph's Hospital, Guntur and Government Hospital, Guntur was done by 30083611 as a partial fulfillment of the requirement of the degree of Master of Science in Nursing at Annai JKK Sampoorani Ammal College of Nursing, under the Tamilnadu Dr.MGR Medical University, Chennai, March 2010.

The objectives of the study were, to compare the pre and post test weight among low birth weight neonates in relation to olive oil massage in experimental group. To compare the the pre and post weight among low birth weight neonates to olive oil massage in experimental group. To compare the mean difference in the weight between low birth weight neonates in experimental and control group to find out the significant association in weight gain in relation to background factors among low birth weight neonates in experimental group.

The research hypothesis were,

H_1 : There will be a significant difference in mean weight before and after olive oil massage among low birth weight neonates in experimental group.

H_2 : There will be a significant difference between the mean difference in weight gain between low birth weight in experimental and control group.

H_3 : There will be a significant association between the mean difference in weight and background factors among low birth weight neonates.

The investigator organized the review of literature under two sections as follows, studies related to infant massage, and studies related to oil massage and weight gain among neonates.

The conceptual framework for this study was based on nursing process model. The research design used was a quasi experimental design. The samples for the study were chosen using quota sampling technique, 20 in experimental group and 20 in control group Background factors of each sample was collected by interview and observation method weight was recorded by electronic weighing machine. The setting St. Josephs General Hospital and G.H. Guntur. Olive oil massage was done for 10 days in experimental group. Pre and post weight was recorded. Data obtained were edited, organized, analyzed by using SPSS (Version 10) and interpreted by descriptive and inferential statistics.

The findings of the study showed that there was a significant weight gain in low birth weight neonates after olive oil massage in experimental group. No selected background factors had significant association with the weight gained. The conclusion of the study was that olive oil massage was effective in weight gain among low birth weight neonate.

The implications, limitation, recommendation were clearly spelt.